



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

H18/Response
R. 4500
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In re PATENT Application of)
Akihiko ISHIBASHI et al) Art Unit Group: 2812
Serial No.: 09/692,211) Examiner: Savitri Meepuri
Filed: October 20, 2000)
For: METHOD OF FABRICATING NITRIDE)
SEMICONDUCTOR DEVICE)

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REQUEST FOR RECONSIDERATION

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Examiner's Office Action mailed September 9, 2002, the due date for which having been extended one (1) month to January 9, 2003, please consider the following remarks in connection with the above-identified application.

At the outset, the Examiner is thanked for the indication of the allowance of claims 4-7 and 13.

Claims 4-8, 10-11 and 13 are pending in the instant application, of which claims 8 and 13 are independent.

Turning now to the Office Action, claims 8, 10, and 11 are rejected under 35 U.S.C. §102(e) as anticipated by Van de Walle et al. (U.S. Patent No. 6,430,202 – hereafter Van de Walle). This rejection is respectfully traversed at least for the reasons provided below.

Claim 8 of the present invention recites a method of fabricating a nitride semiconductor device by a vapor deposition method comprising the steps of: forming plural seed crystals on a substrate; selectively growing, on the substrate, a first nitride semiconductor layer including aluminum from the plural seed crystals under a first growth ambient pressure; and growing, on said first nitride semiconductor layer, a second nitride semiconductor layer under a second growth ambient pressure different from said first growth ambient pressure, wherein the first growth ambient pressure is lower than the second growth ambient pressure, and is lower than the atmospheric pressure.

The Examiner asserts that as shown in Fig. 4A of cited reference Van de Walle the MQW region 120 corresponds to the first nitride semiconductor layer of the present invention and the p-cladding layer 130 correspondence to the second nitride semiconductor layer of the present invention. However, as shown in column 10, lines 11-12 of Van de Walle, the MQW region 120 is composed of $\text{In}_{0.12}\text{Ga}_{0.88}\text{N}$, and does not include aluminum (Al). Hence, the composition of the first semiconductor layer of Van is different from that of the first semiconductor layer of the present invention, and the present invention is different from Van de Walle.

Moreover, as shown in column 6, lines 33-39 of Van de Walle, although the high hydrogen carrier gas flows are required to inhibit pre-reactions between trimethylaluminum and ammonia, this condition is required for growing the p-cladding 130 and not for growing the MQW region 120. Hence, Van fails to teach that aluminum is included in the MQW region 120.

Consequently, since each and every feature of the present claims is not taught (and is not inherent) in the teachings of Van de Walle, as is required by MPEP Chapter 2131 in order to establish anticipation, the rejection of claims 8, 10, and 11 under 35 U.S.C. § 102(e), as anticipated by Van de Walle is improper and should be withdrawn.

Having responded to the rejection set forth in the outstanding non-Final Office Action, it is submitted that claims 8, 10, and 11 are also in condition for allowance. An early and favorable Notice of Allowance is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, the Examiner is courteously requested to contact Applicants' undersigned representative.

Respectfully submitted,



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